IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Stanley L. Lehmann, et al)

Group Art Unit: NYA

Application No.: NYA

:

Filed: Concurrently Herewith:

For: CURABLE COMPOSITIONS FOR : ADVANCED PROCESSES, AND )

PRODUCTS MADE THEREFROM : August 18, 2003

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

# INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.51(b), 1.56, 1.97 and 1.98, Applicants draw the Examiner's attention to the documents that appear listed on the attached Form PTO-1449. Copies of all such documents are attached hereto.

Applicants respectfully request that each of these documents be considered by the Examiner, made of record herein, listed on the "Notice of References Cited" to be issued in this application and printed on any patent which may issue from this application. Applicants also respectfully request that a copy of the attached Form PTO-1449, initialed by the Examiner, be returned to Applicant's attorney together with the next

communication indicating that these documents have in fact been considered.

Applicants request a prompt and favorable examination of the instant application.

Applicants' undersigned attorney may be reached by telephone at (860) 520-5001 or by facsimile at (860) 543-7527. All correspondence should continue to be directed to the address given below.

Respectfully submitted,

Steven C. Bauman

Attorney for Applicants Registration No. 33,832

HENKEL LOCTITE CORPORATION 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067 FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use Several Sheets if Necessary)

ATTORNEY DOCKET NO.: LAA-106/US

Concurrently Herewith

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Stanley L. Lehmann, et al.

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	U.S. PATENT DOCUMENTS							
EXAMINER'S INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
	4,607,091	08/1986	Schreiber	528	96			
	4,806,267	02/1989	Culbertson, et al.	252	182.23			
	5,021,484	06/1991	Schreiber, et al.	524	100			
	5,200,452	04/1993	Schreiber	524	398			
	5,281,388	01/1994	Palmer, et al.	264	571			
	5,315,462	05/1994	Ohkubo, et al.	360	96.5			
	5,369,192	11/1994	Ko, et al.	525	484			
	5,439,635	08/1995	Seemann	264	510			
	5,443,911	08/1995	Schreiber, et al.	428	413			
	5,445,911	08/1995	Russell, et al.	430	115			
	5,480,603	01/1996	Lopez, et al.	264	131			
	5,543,516	08/1996	Ishida	544	69			
	5,567,499	10/1996	Cundiff, et al.	428	116			
	5,677,048	10/1997	Pushaw	428	320.2			
	5,851,336	12/1998	Cundiff, et al.	156	272.2			
	5,902,535	05/1999	Burgess, et al.	264	257	1		
	5,955,566	09/1999	Lee, et al.	528	310			
	6,207,786 B1	03/2001	Ishida, et al.	528	94			
	6,313,248 B1	11/2001	Boyd, et al.	526	262			

DOCUMENT	PUBLICATION	COUNTRY OR	CLASS	SUB	TRANSLATION		
NUMBER	DATE	PATENT OFFICE	CLASS	CLASS	YES	NO	
0 323 142 B1	09/1993	EPC	C08L	71/00			
0 518 060 A2	05/1992	EPC	C08G	73/10			

OTHER DOC	JMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)
	S. Rimdusit and H. Ishida, "Development of New Class of Electronic Packaging
	Materials Based on Ternary System of Benzoxazine, Epoxy, and Phenolic Resin,"
	Polymer, 41, 7941-49 (2000)
	H. Ishida and D. Allen, "Mechanical Characterization of Copolymers based on
	Benzoxazine and Epoxy", Polymer, Vol. 37, No. 20, pp. 4487-4495 (1996)
	H. Ishida and Y. Rodriguez, "Curing Kinetics of a New Benzoxazine-Based Phenolic
	Resin by Differential Scanning Calorimetry". Polymer, Vol. 36, No. 16,
	pp. 3151-3158(1995)
	H. Kim and H. Ishida, "A Study on Hydrogen-Bonded Network Structure of
	Polybenzoxazines" J. Phys. Chem. A 106, pp. 3271-3280 (2002)
	X. Liu and Y. Gu, "Study on the Volumetric Expansion of Benzoxazine Curing with
	Different Catalysts", J. of Appl. Sci., Vol. 84, pp 1107-1113 (2001)
	S. Rimdusit and H. Ishida, "Gelation Study of High Processability and High Reliability
	Ternary Systems based on Benzoxazine, Epoxy, and Phenolic Resins for an
	Application as Electronic Packaging Materials", Rheol Acta 41, pp. 1-9 (2002)

### FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

## INFORMATION DISCLOSURE STATEMENT BY APPLICAN

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GROUP: NYA

Page 2 of 3 H. Kim, H. Ishida, "Study on the Chemical Stability of Benzoxazine-Based Phenolic Resins in Carboxylic Acids", J. Appl. Polym. Sci., Vol. 79, pp. 1207-1219 (2001) H. Ishida, D. J. Allen, "Gelation Behavior of Near-Zero Shrinkage Polybenzoxazines", J. Appl. Polym. Sci., Vol. 79, 406-417 (2001) H. Ishida, D.P. Sanders, "Improved Thermal and Mechanical Properties of Polybenzoxazines Based on Alkyl-Substituted Aromatic Amines", J. Polym. Sci.: Part B, Vol. 38, pp. 3289-3301 (2000). H. Ishida, D.P.Sanders, "Regioselectivity and Network Structure of Difunctional Alkyl-Substituted Aromatic Amine-Based Polybenzoxazines", Macromolecules, 33, 8149-8157 (2000) S. B. Shen and H. Ishida, "Dynamic Mechanical and Thermal Characterization of High-Performance Polybenzoxazines", J. of Polym. Sci.: Part B Polym. Phy., Vol. 37, 3257-3268 (1999). S. Rimdusit and H. Ishida, "Synergism and Multiple Mechanical Relaxations Observed in Ternary Systems Based on Benzoxazine, Epoxy, and Phenlic Resins". J. of Polym. Sci: Part B: Polym. Phy., Vol. 38, 1687-1698 (2000). J. Dunkers, H. Ishida, "Reaction of Benzoxazine-based Phenolic Resins with Strong and Weak carbonxylic Acids and Phenols as Catalysts", J. of Polym. Sci.; Part A: Polym. Chem., Vol. 37, 1913-1921 (1999) X. Zhang, A. C. Potter and D. H. Solomon, "The Chemistry of Novolac Resins - V. Reactions of Benzoxazine Intermediates", Polymer, Vol. 39, 399-404 (1998) X. Zhang and D. H. Solomon, "The Chemistry of Novolac Resins - VI. Reactions Between Benzoxazine Intermediates and Model Phenois", Polymer, Vol. 39, No. 2, pp. 405-412 (1998) Y. Wang and H. Ishida, "Devolopment of Low-Viscosity Benzoxazine Resins and Their Polymers", J. of Appl. Polym. Sci., Vol. 86, pp. 2953-2966 (2002) K. Hemvichian and H. Ishida, "Thermal Decomposition Processes in Aromatic Amine-Based Polybenzoxazines Investigated by TGA and GC-MS. Polymer. Vol. 43, pp. 4391-4402 (2002) B.M. Culbertson, "Cyclic Imino Ethers in Step-Growth Polymerizations", Prog. Polym. Sci., Article in Press H. Kimura, S. Taguchi, A. Matsumoto, "Studies on New Type of Phenolic Resin (IX) Curing Reaction of Bisphenol A-Based Benzoxazine with Bisoxazoline and the Properties of the Cured Resin. II. Cure Reactivity of Benzoxazine", J. of Appl. Polym. Sci., Vol. 79, 2331-2339 (2001). P. Chutayothin, H. Ishida, and S. Rowan, "Cationic Ring-Opening Polymerization of Monofunctional Benzoxazine", Polymer Reprints 2001, 42(2), pp. 599-600,621-622. T. Agag and T. Takeichi, "Novel Benzoxazine Monomers Containing p-Phenyl Propargyl Ether: Polymerization of Monomers and Properties of Polybenzoxazines". Macromolecules 2001, 34, pp. 7257-7263. H. Kimura, et al., "New Thermosetting Resin from Poly(p-vinylphenol) Based Benzoxazine and Epoly Resin", J. of Appl. Polym. Sci, Vol. 79, 555-565 (2001) A. S. C. Lim, et al., "Chemistry of Novolac Resins, X. Polymerization Studies of HMTA and Strategically Synthesized Model Compounds", J. of Polym. Sci.: Part A: Polym. Chem., Vol. 37, 1347-1355 (1999).

# FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets if Necessary) ATTORNEY DOCKET NO.: LAA-106/US APPLICATION NO.: NYA APPLICATION NO.: LAA-106/US Stanley L. Lehmann, et al. FILING DATE: Concurrently Herewith NYA

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	H. Y. Low and H. Ishida, "Mechanistic Study on the Thermal Decomposition of
] ] ]	Polybenzoxazines: Effects of Aliphatic Amines", J. of Polym. Sci.: Part B: Polym.
	Phy., Vol. 36, pp. 1935-1946 (1998)
	H. Kimura, et al., "Epoxy Resin Cured by Bisphenol A. Based Benzoxazine", J. of
	Appl. Polym. Sci., Vol. 68, 1903-1910 (1998).
	J. E. McGrath, et al., "Syntheses and Characterization of Segmented Polyimide-
	Polyorganosiloxane Copolymers", Adv. in Polym. Sci., Vol. 140, pp. 61-105 (1999)
	ULTEM 2000 (CAS Reg. No. 61128-46-9)
	W. J. Burke, et al., "A New Amino Alkylation Reation. Condensation of Phenols with
	Dihydro-1, 3-Aroxazines", J. Org. Chem., Vol. 30(10), pp. 3423-3427 (1965)
	J. Jang and D. Seo, "Performance Improvement of Rubber-Modified
	Polybenzoxazine", J. of Appl. Polym. Sci., Vol. 67, pp. 1-10 (1998).
	R. A. Pearson, "Toughening Epoxies Using Rigid Thermoplastic Particles",
	American Chemical Society, pp. 405-425 (1993)
	Hajime Kimura, et al., "New Thermosetting Resin from Bisphenol A-Based
	Benzoxazine and Bisoxazoline", J. Appl. Polym. Sci., Vol. 72, pp. 1551-1558 (1999)
	YX. Wang, H. Ishida, "Catonic Ring-Opening Polymerization of Benzoxazines",
	Polymer 40, pp. 4563-4570 (1999)

EXAMINE	R:	DATE CONSIDERED:			
EXAMINER:		sidered. Draw line through citation if not in conformance and not considered.  y of this form with next communication to Applicant.			